

REMARKS

Claims 1-52 are pending in this application. Claims 1-30, 41-44 and 46 are rejected by the Examiner. Claims 31-40, 45 and 47-52 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention and species.

Amendments

Claims 1-4, 6-8, 12, 23, 25, 41, and 46 have been amended. New claim 53 has been added. Claims 10, 11, 13, 14, 20, and 21 have been cancelled. The claims that remain after the amendments are 1-9, 12, 15, 15-19, 22-30, 41-44, 46, and 53. These amendments are fully supported by the application as filed and introduce no new matter. Entry of the amendments is requested.

Claim Rejections – 35 USC § 102

Claims 1-5, 7, 12, 16, 17, 41, 42 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated BARCAY et al (5820855).

Claims 1-5, 7, 12, 15-20 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by HONGYU et al. (CN1155978).

Claims 1-9, 12, 15-19, 41, 42, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by DYKSTRA et al (WO 91/07972).

Claim Rejections – 35 USC § 103

Claim 1-9, 12, 15-19, 24-29, 41, 42, and 46 are rejected under 35 U.S.C. 103(a) as obvious over DYKSTRA-WO.

Claims 1-9, 12, 15-19, 24-29, 41, 42 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over BARCAY et al. or HONGYU-CN or DYKSTRA-WO in view of KATAYAMA et al. (6335026) and further in view of BLUM (5518719).

Double Patenting

Claims 1-9, 12, 15-19, 25-29, 41 and 42 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 7192600.

Claims 1-6, 8, 9, 16, 41, and 42 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 5820855.

Applicants traverse these rejection except as noted below and submit that the claims are in condition for immediate allowance.

Discussion

1. The Invention

The present invention is directed to the discovery that water-sensitive insecticides can be stabilized against degradation due to the presence of water, thereby prolonging the insecticidal activity of these water-sensitive insecticides in compositions containing free water. This result is achieved by combining the water-sensitive insecticide with an effective amount of a material, the insecticide stabilizer, that interacts with the water-sensitive insecticide to stabilize it against degradation by free water. Surprisingly, this result is achieved without otherwise binding the water (e.g., through the use of water powder) to inhibit degradation of the water-sensitive insecticide.

Preferred examples of water-sensitive insecticides are acephate and methamodphos. Preferred examples of useful insecticide stabilizers include boric acid, borate compounds, and nanoparticles.

With respect to boric acid and borate compounds, it was especially surprising to find that these compounds stabilized water-sensitive insecticides against water as they have been used previously as insecticides by themselves and are considered to be water-sensitive.

2. The 35 USC § 102(b) Rejections

BARCAY et al does not anticipate 1-5, 7, 12, 16, 17, 41, 42 and 46. This reference teaches an insecticidal composition that employs water powder and an insecticide. Water powder is a dry composition in which water is entrapped in a solid fat, usually a hydrogenated

fat. Thus the water that is present in water powder is not entrapped and is not free to degrade a water-sensitive insecticide in an insecticide composition. As a result, the composition of BARCAY et al remains stable until the insecticide composition is ingested by and digested by the insect. See column 2, lines 19-36, especially, lines 29-31.

It is also submitted that BARCAY et al teaches away from the use of free water in its compositions. In this regard, the Examiner's attention is directed to Example 3 of the reference. Two formulations are disclosed. Formulation A contains water powder, boric acid, sucrose, and soybean oil. No free water is present in this formulation. Formulation B contains boric acid, sucrose flour, soy shortening, and free water. The test results comparing the performance of these two formulations (see Figure 1) show that Formulation A has superior performance to that of Formulation B. This is a clear teaching that the use of free water is to be avoided.

Based upon these comments, it is clear that BARCAY et al fails to teach the composition as claimed by Applicants and as a result does not anticipate any of claims 1-5, 7, 12, 16, 17, 41, 42 and 46.

HONGYU-CN does not anticipate claims 1-5, 7, 12, 15-20 and 46. This reference teaches a composition employing an insecticide, a gelling agent, water, an emulsifier, an attractant, a preservative, and an antioxidant. HONGYU-CN fails to disclose an insecticide stabilizer as required by the present invention. To the contrary, HONGYU-CN is silent with respect to the use of a stabilizer to stabilize the water-sensitive insecticide against degradation by water.

The Examiner has suggested that the emulsifier of claim 1, the antioxidant of claim 2, or the preservative of claim 7 can be the stabilizer. These materials do not stabilize the water-sensitive insecticide against degradation by water as is required by the present claims. Rather, they each perform different functions (e.g., maintaining an emulsion, protecting against the oxidative effects of the sun, preventing the attractant from degrading respectively). As a result, HONGYU-CN does not teach the composition as claimed by Applicants and does not anticipate any of claims 1-5, 7, 12, 15-20 and 46.

DYKSTRA-WO does not anticipate 1-9, 12, 15-19, 41, 42, and 46. This reference teaches a composition that employs an insecticidally active ingredient, water, and carrageenan. This reference does not disclose the use of a stabilizer to stabilize the water-sensitive insecticide against degradation by water. As a result, DYKSTRA-WO does not teach the composition as claimed by Applicants and does not anticipate any of claims 1-9, 12, 15-19, 41, 42, and 46.

3. The 35 USC § 103(a) Rejections

DYKSTRA-WO does not render claims 1-9, 12, 15-19, 24-29, 41, 42, and 46 unpatentable. The teachings of DYKSTRA-WO have been discussed above. This reference is directed to the formation of a gel through the use of a specific ingredient, that is, carrageenan. The reference nowhere teaches or suggests that a water-sensitive insecticide can be stabilized against degradation by water through the use of an insecticide stabilizer. As a result, there is no recognition that the use of an insecticide stabilizer is needed. Thus, the combination of a water-sensitive insecticide with a stabilizer for that insecticide is not obvious absent some reason to make the combination. It is respectfully noted that the Examiner has provided no such reason other than it would be obvious to do so. Accordingly, it is further submitted that the Examiner has failed to establish a *prima facie* case of obviousness to support the rejection of claims 1-9, 12, 15-19, 24-29, 41, 42, and 46 and as a result the rejection must be withdrawn.

The combination of BARCAY et al with KATAYAMA et al (6335026) further in view of BLUM (5518719) does not render claims 1-9, 12, 15-19, 24-29, 41, 42 and 46 unpatentable. Likewise, the combinations of HONGYU-CN with KATAYAMA et al further in view of BLUM, and DYKSTRA-WO with KATAYAMA et al further in view of BLUM do not render claims 1-9, 12, 15-19, 24-29, 41, 42 and 46 unpatentable.

Applicants note that the Examiner has provided no reasoning why these three combinations render claims 1-9, 12, 15-19, 24-29, 41, 42 and 46 unpatentable. All that the Examiner has done is to assert his conclusion.

Applicants have discussed the BARCAY et al, HONGYU-CN, and DYKSTRA-WO references above. This discussion includes the shortcomings of each reference. Neither KATAYAMA et al nor BLUM overcome these shortcomings.

To illustrate, KATAYAMA et al teaches the preparation of stabilized, solid pesticidal compositions. All of the disclosure, including each example, teaches that the solid, pesticidal compositions were stabilized against the effects of ambient conditions. Nothing in this reference teaches or suggests that the dry composition should be combined with water as is required by the present claims.

To further illustrate, Blum teaches dry compositions for the elimination of cockroaches and palmettos. It is silent with respect to the use of water in the composition. Thus, this reference is, at best, cumulative to KATAYAMA et al.

Even when KATAYAMA et al or BLUM are combined with any of BARCAY et al , HONGYU-CN, and DYKSTRA-WO, the resultant combination fails to provide the invention claimed by Applicants. As a result, these combinations do not render any of claims 1-9, 12, 15-19, 24-29, 41, 42 and 46 unpatentable.

It is also submitted that new claim 53 is patentable over the references of record. This claims specifies that the composition consists essentially of the itemized ingredients. None of the references teach or suggest this particular combination of ingredients.

4. The obviousness-Type Double Patenting Rejections.

Applicants will submit a Terminal Disclaimer in compliance with 37 CFR 1-321© or 37 CFR 1.321(d) with respect to US 7192600 in the event that claims 1-6, 8, 9, 16, 41, and 42 are indicated as allowable by the Examiner.

Applicants traverse the obviousness-type double patenting rejection of claims 1-6, 8, 9, 16, 41, and 42 over claims 1-16 of US 5820855.

The present claims all require the presence of free water in the composition. The claims of US 5820855 are all directed to a composition that requires the absence of free water. Applicants respectfully submit that it would not be obvious to add an ingredient that would be contrary to the teachings of US 5820855 in order to achieve the present invention.

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Applicant: James P. Gardner Jr., et al.

Serial No. 10/661,912

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For: WATER-BASED PEST BAIT COMPOSITIONS HAVING WATER-SENSITIVE INSECTICIDES AND METHODS OF MAKING AND USE THEREOF

Examiner: Levy, Neil S.

Group Art Unit: 1615

Docket No.: 163.1324US11 (ECO0021/US/3)

CONCLUSION

In light of the foregoing remarks, it is respectfully submitted that the grounds of rejection raised in the pending Office Action have been overcome and that the present case is now in condition for allowance. The prompt issuance of a notice to that effect is solicited.

Respectfully Submitted,
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